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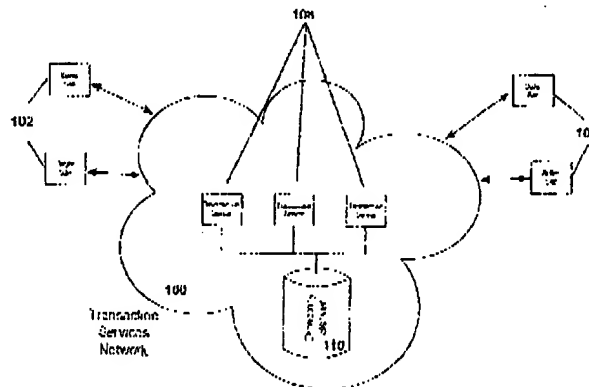(CIP) to earlier application:
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—   *with international search report*

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(54) Title: SYSTEM AND METHOD FOR SCHEMA EVOLUTION IN AN E COMMERCE NETWORK

(57) Abstract: A method and computer system are described for conducting commercial transactions by the exchange of electronic documents. The computer system includes a transaction services network, which comprises a plurality of transaction servers for providing services to support commercial transactions. Trading partners operate servers which communicate with the transaction services network via the Internet. The electronic documents are exchanged between trading partners engaged in a transaction. The documents are written in a markup language such as XML. The tags used in the document instances are defined in schemas. Each schema defines a document type, which corresponds to a type of transaction. An enhanced type of XML schema may be used which supports integrity constraints and polymorphism. Schemas are identified by the use of Uniform Resource Names. XML processors residing on transaction servers or trading partner servers parse document instances by retrieving the URNs corresponding to the schemas used to interpret the document. The URNs are converted to location-dependent URIs in order to locate the schemas. URNs are resolved to location-dependent URIs by use of the LDAP protocol. URNs may be converted to LDAP URLs which are used to search LDAP compliant directories. The directories serve as registries for the URI values corresponding to the URNs.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7   G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7   G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	W3C: "Schema for Object Oriented XML 2.0 (SOX)" W3C NOTE, 'Online! 30 July 1999 (1999-07-30), XP002203857 Retrieved from the Internet: <URL:http://www.w3.org/TR/NOTE-SOX/> 'retrieved on 2002-06-27! the whole document	1-35
X	W3C: "Resource Description Framework (RDF) Schema Specification" W3C PROPOSED RECOMMENDATION, 'Online! 3 March 1999 (1999-03-03), XP002203858 Retrieved from the Internet: <URL:http://www.w3.org/TR/1998/WD rdf sche ma/> 'retrieved on 2002-06-27! the whole document	1-35

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[X] Further documents are listed in the continuation of box C.   [ ] Patent family members are listed in annex.

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"&" document member of the same patent family

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Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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X	W3C: "XML Schema Part1: Structures" W3C WORKING DRAFT, 'Online! 6 May 1999 (1999-05-06), XP002203859 Retrieved from the Internet: <URL:http://www.w3.org/1999/05/06-xmlschem a-1/> 'retrieved on 2002-06-27! the whole document	1-35
A	W3C: "XML Schema Par2: Datatypes" W3C WORKING DRAFT, 'Online! 6 May 1999 (1999-05-06), XP002203860 Retrieved from the Internet: <URL:http://www.w3.org/1999/05/06-xmlschem a-2/> 'retrieved on 2002-06-27! the whole document	1,14,25, 31
A	KENT BROWN: "BizTalk: Fluent In E-Business" DEVX WEBSITE, 'Online! December 1999 (1999-12), XP002203861 Retrieved from the Internet: <URL:http://www.devx.com/upload/free/featu res/entdev/1999/12dec99/kb1299/kb1299.asp> 'retrieved on 2002-06-28! the whole document	1,14,18, 23-25, 31,32,34
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A	W3C: "Extensible Markup Language (XML)" W3C SPECIFICATION, 'Online! 8 December 1997 (1997-12-08), XP002203864 Retrieved from the Internet: <URL:http://www.w3.org/TR/PR-xml-971208> 'retrieved on 2002-06-27! the whole document	1,14,25, 31

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INTERNATIONAL SEARCH REPORT

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NILS KLARLUND, ANDERS MOLLER, MICHAEL I. SCHWARTZBACH: "Document Structure Description 1.0 (DSD)" AT&T AND BRICS, 'Online! 1999, XP002203865 Retrieved from the Internet: <URL:http://www.brics.dk/DSD/dsddoc.html> 'retrieved on 2002-06-27! the whole document	1,14,25, 31
A	NARAYANASWAMY K ET AL: "An incremental mechanism for schema evolution in engineering domains" DATA ENGINEERING, 1988. PROCEEDINGS. FOURTH INTERNATIONAL CONFERENCE ON LOS ANGELES, CA, USA 1-5 FEB. 1988, WASHINGTON, DC, USA,IEEE COMPUT. SOC. PR, US, 1 February 1988 (1988-02-01), pages 294-301, XP010011426 ISBN: 0-8186-0827-7 the whole document	1,14,25, 31

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